

PCTWORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : G02B 6/26	A1	(11) International Publication Number: WO 00/13051 (43) International Publication Date: 9 March 2000 (09.03.00)
(21) International Application Number: PCT/US99/19694 (22) International Filing Date: 31 August 1999 (31.08.99) (30) Priority Data: 60/097,830 31 August 1998 (31.08.98) US (71) Applicant (for all designated States except US): DIGITAL OPTICS CORPORATION [US/US]; Suite J, 5900 Northwoods Parkway, Charlotte, NC 28269 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): TE KOLSTE, Robert [US/US]; 2320 Belvedere Avenue, Charlotte, NC 28205 (US). KATHMAN, Alan, D. [US/US]; 4700 Lone Tree Lane, Charlotte, NC 28269 (US). JOHNSON, Eric, G. [US/US]; 5721 Whitegate Lane, Charlotte, NC 28269 (US). FELDMAN, Michael, R. [US/US]; 3117 Lakewood Edge, Charlotte, NC 28269 (US). (74) Agent: MORSE, Susan, S.; Jones Volentine, L.L.P., Suite 150, 12200 Sunrise Valley Drive, Reston, VA 20191 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: DIFFRACTIVE VERTICAL CAVITY SURFACE EMITTING LASER POWER MONITOR AND SYSTEM (57) Abstract A power monitor for a light emitter emitting from a single face creates a monitor beam by deflecting a portion of the application beam and further manipulating the monitor beam to allow more efficient use of the monitor beam. For example, the monitor beam may be collimated to allow an increase in spacing between the light emitter and a detector for sensing the monitor beam. Alternatively or additionally, the monitor beam may be focused to allow use of a smaller detector and of a smaller percentage of the application beam. The diffractive element deflecting the beam may be either transmissive or reflective. The additionally manipulation of the monitor beam may be provided by the same diffractive element which deflects the beam, which is particularly useful when the diffractive element is reflective, and/or by additional optical elements.		